Form PTO-1449 U.S. DEPARTMENT OF COMMERCE ATTY. DOCKET NO. Serial No.: (REV. 8-83) 08/057, 662 2-199C2 Applicant: INFORMATION DISCLOSURE CITATION OHN West + DENG-KE YANG Filing Date: 5-4-93 (Use several sheets if necessary) U.S. PATENT DOCUMENTS ROD EXAMINER INITIAL MAME CLASS SUBCLASS FILING DATE 11M HODSON ET AL 750 160 DONALD HEILMEIER ET AL GOLDMACHER ETAL WVSOCKI 250 ARTMELL + Churchill HURCHILL et AL 3 CIMI 6-28-14 GReubel ET AL. lfaas eT AL. FOREIGN PATENT DOCUMENTS DATE TRANSLATION COUNTRY SUBCLASS CLASS YES 8 1 4-24-91 EPO EPO JuM. 10-16-91 י תווז ב GREAT BRITAIN OTHER DOCUMENTS (Including Author, Title, Date, Perlinent Pages, Etc.) Study of Optical Storage effect in CIM. Mixed LiquiD-CRYSTAL 11-15-72; Appl. Phys. Lett. Vol 21 PP 455-457 ELECTRIC-FIELD-INDUCED Phase Change IN 5-6-68 Physical Review Letters Volat # 19 point-5

*EXAMIMER: Initial if citation considered, whether or not citation olth MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

DATE CONSIDERED

Liquin Crystals.

Charl

	Form F REV.			40)			•	U.5	DEPARTS	THADEWARK OFFICE	ATTY. DOCKET NO.		Serial No.:			
ľ												12-19902 Applicant:		08/05	1,6	62	
	••••	Onn	171		• (<i>)</i> (30		Ua	OKE C	IATION	JOH.	N Wes	T + De	Ng-1	Ce YANG	
L			w	se 1	Dev	er	al .	eh:	cel.	s il neces	z ary)	Filing Date:5	-4-93	GROUP 35		<i>J</i> —	
L		_	,								U.S. PAT	ENT DOCUMENTS		···			
	HITIAL	<u> </u>	00	DOCUMENT NUMBER						DATE		NAME	CLASS	SUBCLASS	IF AP	ING DATE	
	imi	1	3	8	8	5	9	8	ja	5.27-	1 Fera	Fergason et AL.					
1	CIPLY	1_	3	9	6	q	2	6	4	1-13-1	6 DAVIS	:	252	299			
	Cimi	_	4	0	2	Į	1	0	6	5-10-1	1 DAVIS	Ĭ	252	299	1	,	
	Enni	<u> </u>	4	D	2	0	9	i	2	1-31-1	8 Mc Nay	hton	73	35h	gris V		
XI,	Me		4	ø	1	1	2	b	0	3/1-1			77/	356			
<u> </u>	J.W.	Ľ.	4	2	5	2	4	ì	7	24-8		ER ET AL.	380	349			
	Cum		4	4	시	1	1	3	2	5-8-84			350	346			
L			1											1-14			
L					1	1			Ы								
L					1					·							
L										-							
t	FOREIGN PATENT DOCUMENTS																
-					_		_		_		FOREIGN PA	TENT DOCUMENTS					
		0	200		ENT	T 44	UM	9 E	•	DATE	T	TENT DOCUMENTS	CLASS	SUBCLASS		BLATION	
			800		-	- 7		••	•	DATE	T		CLASS	SUBCLASS	TRAN:	SLATION NO	
			800	1	7		1	• €	•	DATE	T		CLASS	SUBCLASS			
		<i>(</i>	900	3	7	7		• ε	•	DATE	T		CLASS	SUBCLASS			
		0	000			7	3 1	• €	•	DATE	T		CLASS	SUBCLASS			
			200	COMI			- Ju	• • •	•	DATE	cou	HTRY	CLASS	SUBCLASS			
			, DOG								COU			SUBCLASS			
					0	TH	(EF		000	CUMENT	COU	Title, Date, Perlinent Pa	gea, Etc.)		YES	MO	
<u> </u>	- K	22		301	0 2	TH.	Me	3 6	DOO	CUMENTS	COU S (Including Author, FECTS A EL	Title, Date, Pertinent Pa	see, Eics	lestrol	VES .	MO	
Ĉ				301	0 2 1	TH., /	Mu C	RE	DO06	CUMENTO	COU S (Including Author, FECTS & FL MOLECULAR (Title, Date, Pertinent Pa ectric Fields of Rystals 1966	see. Eics	lestrol pp 167-1	No N	A NOATE	
C	h ₁			Joi 19 W	0 2 1 3.	TH.	Mu C	RUR	pe pe	CUMENTO	Good Could a C	Title, Date, Perlinent Parect FIELDS of RYSTALS, 1966 1	cric	lestrol pp167-1	No N	A NOATE	
C	h ₁			Joi 19 W Mo	0 00 11 3.	THE ID	Mu C	RURCH	pe R	CUMENTER, EF	GOU S (Including Author). FECTS A EL MOLECULAR C THERE EFFE	Title, Date, Perlinent Polectric Fleuds of Rystals, 1966 Notest Now 1, pp 325	PRIC S	lestrol pp167-1 Liquin	Non 88 CRys	ANGATE	
C	h1			John W Mo	0 0 1 3 4	THE	Mu C	RURALA	pe R N	CUMENTO	FECTS A FL MOLECULAR C TAGE Effe	Title, Date, Perlinent Parect Fields of Multi-Chole	Rea. EICJ ON Cho OC 2 CRIC - 33: STERI	lestrol pp 167-1 Liquin	Non 88 CRys	ANGATE	
CI	M1 manuer			John W Mo	0 0 1 3 4	THE	Mu C	RURALA	pe R N	CUMENTO	FECTS A FL MOLECULAR C TAGE Effe	Title, Date, Persinent Parectal Fields of Multi-Chole Express 1991 NOATE CONSIDERED I	Rea. EICJ ON Cho OC 2 CRIC - 33: STERI	lestrol pp 167-1 Liquin	Non 88 CRys	ANGATE	
CO	M1 AMINER	N. W.		John W Mo	0 0 1 3 4	THE	Mu C	RURALA	pe R N	CUMENTO	FECTS A FL MOLECULAR C TAGE Effe	Title, Date, Perlinent Polectric Fleuds of Rystals, 1966 Notest Now 1, pp 325	Rea. EICJ ON Cho OC 2 CRIC - 33: STERI	lestrol pp 167-1 Liquin	Non 88 CRys	ANGATE	
COCO	XAMINE	ı. J		John W Mo	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	THE ST SEC	THE MU J	RURRUH	951 Pe	CUMENTE R, EF R, Voi CRys CRys CRyse	FECTS of EL MOLECULAR C THERE EFFE	Title, Date, Persinent Parectal Fields of Multi-Chole Express 1991 NOATE CONSIDERED I	er, Eics) on Cho Jol 2 eRIC - 33= STERII ol 6, N	lestrol pp167-1 Liquin	NON 88 CRYS	A NOATE	



Form PTO-1449 U.S. DEPARTMENT OF COMMERCE ATTY. DOCKET NO. (REV. 8-83) 12-199ca INFORMATION DISCLOSURE CITATION Applicant: JOHN WEST + DENG Ke YANG (Use several sheets if necessary) U.S. PATENT DOCUMENTS EXAMINER INITIAL DATE MAME SUBCLASS | FILING DATE FOREIGN PATENT DOCUMENTS TRANSLATION COUNTRY CLASS SUBCLASS YES OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) ELECTRIC FIELD INDUCED TEXTURE CHANGES IN CERTAIN NEMATIS/Cholesteric Liquio Crystal Mixtures,
MOLECULAR CRYSTALS and Liquin Crystals, 1973. VOL 24-pp 103-111 EXAMINER DAGAA Pate considered EXAMINER: Initial/if citation considered, whether or not citation is in co

in conformance and not considered. Include copy of this form with next communication to applicant,

co with MPEP 609; Draw line through citation if not





U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE Form PTO-1449 ATTY. DOCKET NO. (REV. 8-83) 12-19902 08/057,662 Applicant: John West - Dent Ke INFORMATION DISCLOSURE CITATION Filing Date: 5-4.93 (Use several sheets if necessary) U.S. PATENT DOCUMENTS EXAMINER DATE MAME CLASS SUBCLASS FILING DATE FOREIGN PATENT DOCUMENTS DOCUMENT NUMBER TRANSLATION DATE COUNTRY CLASS SUBCLASS YES OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) GARY A. DIR ET AL, Cholesteric Liquid Crystal Texture Change Proc. S.I.D. vol 13/2, Second quarter January Years Corporation, 1972 -pp105-112 Electric - Fleed Induced Phase Change IN Cholesteric RESEARCH LABORATORIES / VEROX CORP. PP47-63- UNKNOW dATE . INDUCED CholeGIERIC STRUCTURE-TRANSFORMATION NATURFORSON 1981, DATE CONSIDERED EXAMINER: Initial If citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include capy of this form with next communication to applicant.

1

Form PTO-1449 U.S. DEPARTMENT OF COMMERCE ATTY. DOCKET NO. (REV. 8-83) 08/051,462 12-199(2 Applicant: John West + Dent-Ke INFORMATION DISCLOSURE CITATION Filing Date: 5-4-93 (Use several sheets if necessary) U.S. PATENT DOCUMENTS ERAMINER ! DOCUMENT NUMBER DATE MAME FILING DATE CLASS SUBCLASS FOREIGN PATENT DOCUMENTS SUBCLASS TRANSLATION DOCUMENT NUMBER DATE COUNTRY CLASS YES OTHER DOCUMENTS (Including Author, Title, Date, Perlinent Pages, Etc.) R.A.M. HIKMET, STRUCTURE OF Cholestric gels AND their electrically Cin, light SCATTERING AND COLOUR CHANGES LIQUID CRYSTALS 992 VOL12 NO2 pp. 319-336 HeILAMEIER GEORGE - A NEW Electric Fleck CONTROLLED Reflective OPTHEAL STORAGE EFFECT IN MIXED LIQUID (RYSTAL SYSTEMS, 1969, pp 34-38 EXAMINER: Initial If citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

7

Form PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE ATTY. DOCKET NO. (REV. 8-63) 12-19902 08/057,662 Applicant: INFORMATION DISCLOSURE CITATION JOHN WEST + DENG-Ke YANG Filing Date: 5-4-93 (Use several sheets if necessary) U.S. PATENT DOCUMENTS EKAMINER INITIAL DATE -SUBCLASS FILING DATE CLASS FOREIGN PATENT DOCUMENTS SUBCLASS TRANSLATION DOCUMENT NUMBER DATE COUNTRY CLASS YES OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) DONALD White, New Absorptive Mode Reflective liquin crystal display Device - Journal of Applied Physics - 1974 - Vol 45 - Noil-pp 4718-23 D-K MANG et AL- Cholesteric Liquid Crystal/polymer dispersion FOR PHAZE FREE ShuTTERS - Appl. Phys. Lett 60-6-22-92-pp 3102-3104 10 DOANE CT AL. - CURRENT TRENDS IN POLYMER DISPERSED LIQUID CRYSTAL DATE CONSIDERED 8-17-94 EXAMINER: Initial If citation considered, whether or not citation is in confe ce with MPEP 607; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant,

		۵.										Short	1 .	8		
Form P (REV. 8			49			U.	S. DEPAI	D TRE	TOF COMMERCE	ATTY. DOCKET HO.		Serial No.: 08/051,662				
1			ON	DI	SC	10	SURF	CIT	ATION	12-19902 Applicant;						
										llohi	U WEST	+ Dex	<u> 56 - Ке</u>	YANG		
		w.	€ •	ver	•1 •	th ce	ts if ne	28892	iry)	Filing Date: 5	-4-93	75	15			
									U.S. PATE	ENT DOCUMENTS			,			
PERAMINER		D01	cyue		NUM	1984	DATE			WAME	CLASS	SUBCLASS	IF APPR	G DATE		
					П			- 1	a .					-		
·					1											
			\top	T	П	T					 					
			\dagger	十	H	+	+-	7			 	<u> </u>	 			
			+	┼-	$oxed{H}$	+	- -				 	<u>. </u>	ļ			
	-		1	1	\coprod	4	ļ			· .						
			\perp	L	Ш		<u> </u>									
			1		П	1	1				\leftarrow					
			\dagger		H	+	-				+			-		
			╁	-	Н	+	 	\dashv			 					
			4		H	\bot	 	\dashv								
			1		Ш											
· ·				_	_		·		FOREIGN PA	TENT DOCUMENTS						
		DOC	UME	MT N	evu.) Ed	DAT		COU	NTRY	CLASS	SUBCLASS	TRANSL	HOITA		
						I		7					10.0			
				Ц												
		\perp				\perp										
						$oldsymbol{ol}}}}}}}}}}}}}}}}}}$										
					z ,	T				•				, ,		
			S	ΟΤΙ	HEF	₹ D0	OCUME	ати	(Including Author,	Title, Date, Pertinent P.	ges, Elc.)	<u> </u>				
<u>, [</u>	I	6	J.W	. [DOA	Ne.	FROM	ν T -	LIT PANCE	Display from	Polita	ا ملک هم				
Cimi		7 1							res - date	• •	V ULY IN	אונב איז	1117 60			
				, .							1 Por y men	2 (0 1)		.)		
CMI		P	Yu.	0				. 0 5	C	Liquin Crystal 3071-8/91/0000	199	TEEF	2 be K 21	0 10		
	十															
Cuni	t		_	-	,					eric Liquin Cry	STAL POI	YMER Ge	L Dispo	RSION		
EXAMINER	L		16+,	12 <u>0</u>	#L\ /	<u>ي و</u> -	1717	LAY	HOPLICATION	U- 1992 DATE CONSIDERED /	<u>/-</u>					
Cl	20	N	la	- 1	M	n	Wh		ľ	8-17-9-	1					
*EXAMINER	: fm			-3							•					

											Ebagi	8	8	
Form P	TO-	144	40					NT OF COMMERCE	ATTY. DOCKET NO.	Serial No.:				
(REV.									12-19902 08/057,66					
INFO	DRM	ATI	ON	DIS	CL	os	URE CIT	ATION	Applicant: John	West	+ Dent	·Ke	YANG	
		w.	e se	vera	l sh	ce1	s il necess	ery)	Filing Date: 5	-4-93	+ Dent	(<i>y</i>	
		,						U.S. PATE	ENT DOCUMENTS					
*EKAMINER INITIAL		00	CUME	4 T &		ER	DATE		NAME	CLASS	SUBCLASS	FILING DATE		
)	\square				Γ								
•			X			1			····	<u> </u>	1			
			\top	H	*	+				 	 			
				H	+	F					 			
				Н	_	_								
			\bot	Ц										
			\perp					\						
			\top	П	T						1			
				Н	+		·			 		<u>. </u>		
	-		+	Н	+	H				 	+			
			+	H	+	H				ļ				
		Ш	丄	Ц		Ш								
· · ·								FOREIGN PA	TENT DOCUMENTS	· ·			·	
		500	.ump	<u>~</u>	UMBI	-	DATE	COU	HTRY	CLASS	SUBCLASS	YES	NO	
				Ц	\perp	Ы								
		1												
			\top	П	1	П								
	\dashv	\dashv	+	Н	+	Н					<u> </u>		<u> </u>	
		+	-	H	+-	Н								
			لـلـ		يل.				· · · · · · · · · · · · · · · · · · ·		1			
		· 1		1	-				Title, Date, Perlinent Pa					
	-	-	14.K	10	<u>ر د</u>	F. 1	n; Th	Ree States	of A Choleste	RIC L	14410 C	RYSTA	14	
ZIM'	_		N	M	l Çî	ر م م	oores ,	CA SelecTS	-Liquin CRysTA	us T	sue 12 .	1985-0	01-7	
ا م									TIC FIELD Effe					
_ Mil								•	I A NI ascus				<u> </u>	
	1	+			ALA	K	CRUST	ALS AND L	Liquin Crystal	s = 197	3-Vol 23	<u>- pp28</u>	3-297	
EXAMINER						J.	1	· · · · · · · · · · · · · · · · · · ·	DATE CONSIDERED	<i>[</i>				
	0	10	nl	10		N	ille		8-17-94					
*EXAMINE	R: In	itiel and s					fored, when	her or not citation to of this form with a	s in conformance with MPI ext communication to appli	EP 607; Dr	ew line throug	h citation	(f not	



Form (•		U.1	S. DEPARTH	ENT OF COMMERCE	ATTY. DOCKET NO.	No.:	Ī			
INF	ORM	ATIO	N D	ISC	LOS	SURE CI	TATION	12-19902 08/057, 462 Applicant:					
								Filing Date: 5-4.93 GROUP 2203 2915					
-		1086	ecve-	101	thee	ts if neces			4.93	2	2915	_	
·EXAMINE	1	000				T	U.B. PATE	ENT DOCUMENTS		1		4	
INITIAL								*AME	CLASS	SUBCLASS	FILING DATE		
CUM	· ·	34	77	1 1		8-1-72		C+ AL,	320	150		<u> </u> :-	
CIM	9255	3947183				3-30-1	HAAS C	CT AL.	350	100			
CIR.		40	9/	[1]	21	6-21-1	8 HAAS e-	+ AL.	350				
em.	Ŀ	44	0 2	3 2	01	10-4-183	1	*/	340	784]	
4		4					A		1		ECENT		
		1	1	\prod	T			······································		- 	ECEIVE		
			П		4					 	MAR 1 7 195	桦	
				Π	十					GF	OUP 22		
				Π	\dagger	<u> </u>			·			100	
			H	H	\dagger	<u> </u>				-		-	
<u> </u>			╁┼	H	+							-	
<u> </u>			Ш	Ш		i	EODEION DA				<u> </u>	_	
	7	2000			. E A	DATE	1	TENT DOCUMENTS	CLASS	SUBCLASS	TRANSLATION	-	
 		_		17						*OBCLASS	YES NO	ļ	
			\vdash	╂	+					<u> </u>			
		-	1	\coprod	1								
		\perp	-	Ц	$\perp \mid$								
				Ш	Щ					_]	
		$oldsymbol{ol}}}}}}}}}}}}}}}}}}}}$		Ц			·	·			2	1	
<u> </u>	\rightarrow	- X	01	HEF	00	CUMENT	(Including Author,	Title, Date, Perlinent Pag	es, Eic.)		·	1	
	- }	+	<u> </u>	_	_	-							
	-	4			<u>.</u>								
		\perp				<u>.</u>					·	1	
												1	
			_	$\overline{\gamma}$				1				1	
			.,.								· ·	1	
EXAMINE	L	<u> </u>		1	. ^	\Λ	[6	PATE CONSIDERED				1	
(the	<u> </u>	0		nk	W		8-17-94		_			
*EXAMINE	R: In	Itial (f	Citet	ion e	ongi	dored, when	her or not citation is	in conformence with MPE at Communication to applic	P 601; Dre	- line through	h citation if not	1	
			- 8		··			ET COMMUNICATION to applic	ent,			1	

USPTO Form	U.S. Department of Commerce Patent and Trademark Office										Attorney Docket No.: Serial No.: 12-19902 08/057,662					
	1	INF	ORM	ATI	ON	DIS	CLO	SUR	E CITATION		Applicant: John West and Deng-ke-Yang					
_	,				She	et	1 0	f 1			Filing Date: May 4, 19	93	-Group:	2203 2	515	
• .	ý.					7				U.S. PATEN	T/DOCUMENTS		•			
Examiner,		Document Number				mbe	r	Date		Name	Class	Subclass	Filing (If appro	g Date opriate		
	AA	4	0/	9	7	1	2	7	6/27//78	Haas et al.		350	330			
**	AB		/						1				/			
	A6					Ī										
	AD					F	\vdash								-	
	AE				Γ	Γ										
	AF			Γ	Г			Γ								
	AG							Γ								
					<u> </u>					FOREIGN P	ATENT DOCUMENTS					
Examiner Initials		_	Do	cum	ent	Nu	mbe	r	Date		Country	Class	Subclass	Trans YES	lation NO	
	АН					\bigcap										
	ΑI			Γ												
	AJ															
	AK															
	AL					Γ										
	АМ					Γ			:							
					0	THE	R D	ocu	MENTS (Inclu	ding Author, Ti	tle, Date, Pertinent Pag	es, etc.)	<u> </u>			
	AN		_		_											
_	_	ļ				<u> </u>	<u> </u>	_								
	AO	_														
												/				
	AP	_													.	
<u>.</u>	<u> </u>	L									\longrightarrow					
	AQ															
											/					
EXAMINER	0	<u>\</u>	'n.	Qe	a	γ	\sqrt{N}	DI	In_			CONSIDERED				
*EXAMINER	I	nit	ial	if	re	fer	enc	e c	onsidered, v	hether or not c	itation is in conformanc and not considered.	e with MPEP 60	9.			
	I	ncl	ude	CO	ру	of	thi	s f	orm with nex	ct communication	to Applicant.					